

Remarks/Arguments:

Claims 1-9, 12, 16-20, 22-27, 30, 35, 37, 38, 40, and 47-50 are currently pending. Claims 1, 7-9, 23, 37, 47, and 48 have been amended for clarification purposes only. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claims 1-9, 12, 16, 17, 22-27, 30, 37, 38, 40, and 47-50 under 35 U.S.C. 103(a) as being unpatentable over Wang, U.S. Patent No. 6,990,453, in view of Barton, U.S. Published Patent Application No. 2002/0072982.

In Wang, landmarks and fingerprints are used to build a database 18. A media sample is captured 12 (Figure 1). Landmarks and fingerprints from the exogenous media sample are computed 14 and matched 16 through use of the database 18. Correspondences are generated 20 and a winning media sample file is located 22.

Wang discloses a sound source continually sampled into a buffer (column 21, lines 64-67). Sound parameters may be extracted from a sound buffer into fingerprints or other intermediate feature-extracted forms and stored in a second buffer (column 22, lines 19-21). New fingerprints may be added to the front of the second buffer while old fingerprints are discarded from the end of the buffer to form a rolling buffer (column 22, lines 22-24).

The method of Wang involves a search first performed on a first subset of sound files and only if the first search fails, then a search of second subset of sound files is performed (column 19, lines 23-34). Wang's method does not involve requesting the mobile station to provide a second set of features and does not appear amenable to modification to request a second set of features from the mobile station since the method of Wang involves a first search of highly used sound files only to be followed by a second search of less highly used sound files. Wang does not contemplate a request for a second set of features, as evidenced by Figure 1, in which Wang finds matching fingerprints 16 and then generates correspondences 20 with sample landmarks to find a winning sound file 22.

Wang does not disclose the subject matter of claim 1, a pertinent part of which is reproduced as follows:

a receiver to receive over the wireless communication link a request message that requests at least one additional feature; wherein the processor is automatically responsive to the request message to extract a second set of features from the digital version of the media sample and to transmit the extracted second set of features

The Patent Office on page 3 lines 7-11 of the Office Action dated May 3, 2007, asserted “In an analogous art, Barton teaches a system for identifying audio samples that includes a recursive feature for automatically requesting more information in order to narrow the search results to find the corresponding file. (Page 5 [0048 and 0049], Page 6 [0059] and Page 7 [0067-0068])”

Barton does not disclose the subject matter of claim 1, a pertinent part of which is reproduced as follows:

a receiver for receiving a request message that requests at least one additional feature over the wireless link; wherein the processor is automatically responsive to the request message to extract a second set of features from the digital version of the media sample and the transmitter is further to transmit the extracted second set

In Applicant’s claimed invention, a first set of features is extracted, a request for at least one additional feature is received, and a second set of features responsive to the request is extracted. Barton does not disclose or suggest a request for an at least one additional feature nor a second set of features being extracted responsive to the request.

In Barton, a recognition engine 110 searches a database 115. The cited passages refer to Figure 1, which show inputs to the recognition engine 110 from an experiential environment 101 after capture and sampling via line 117, and a user input/identification block 120 that inputs along line 122. Both those input lines 117, 122 are uni-directional. This cannot be an oversight in Barton because the signal line between the recognition engine 110 and the database 115 is clearly illustrated as bi-directional, and Barton’s text explicitly distinguishes unidirectional versus bidirectional flow at para 0038. No other inputs to the recognition engine 110 are seen, so the illustration does not support an interactive recursive feature between the recognition engine 110/database 115 and any user or portable device.

Barton also fails to support an interactive recursive feature between the recognition engine 110/database 115 and any external device. Barton (paragraph 0048) describes that characteristics of a sample received at the recognition engine 110 are derived at the database 115, and that a certain level of discrimination is required to resolve any ambiguity arising from multiple triggering events (matches in the database). Barton (paragraph 0049) merely gives an example of song lyrics, and that a relatively large number of characteristics about the same may be derived and compared against the stored data to identify one particular song. In these teachings, the single sample is received at the

recognition engine 110. Any ‘recursive feature’ consistent with the assertion of the final office action must be wholly between the recognition engine 110 and the database 115. Apart from receiving the sample from the experiential environment 110 and the user profile from the user input/identification block 120, there are no inputs to the recognition engine 110.

In contradistinction, claim 1 recites in relevant part:

a transmitter to transmit the extracted first set of features over a wireless communication link,

a receiver for receiving a request message over the wireless link that requests additional features;

wherein the processor is automatically responsive to the request message to extract a second set of features from the digital version of the media sample and the transmitter is further to transmit the extracted second set.

No combination of Wang and Barton are seen to extract a second set of features in response to wirelessly receiving a request message. Barton is seen to use an actual sample at the recognition engine 110/database 115, not to teach a wireless interaction between a device doing the extracting and a device requesting additional features. Barton is not seen to disclose, teach or suggest any wireless request message emanating from the entity that houses the recognition engine 110/database 115.

The remaining four independent claims are 23, 37, 48, and 50. Independent claims 23 (computer program), 48 (mobile station) and 50 (method reciting a portable device) each recite similarly to that quoted above for claim 1, but with somewhat different specifics of language. Independent claim 37 is directed to a computer program such as may be embodied within the database node doing the searching. These four claims, similar to claim 1, recite that a second set of features is extracted and transmitted in response to a request message identifying at least one additional feature.

Claim 23 recites, in pertinent part, as follows:

a first set of computer instructions to extract in response to a user input a first set of features from a digital media sample, and to extract in response to a received request message a second set of features consistent with at least one additional feature requested in the request message...

Claim 37 recites, in pertinent part, as follows:

a second set of computer instructions to search a database of feature sets for all matching sets that match the first set of received features and to determine at least one additional feature that distinguishes

among each of the matching sets; a third set of computer instructions to transmit over the network a request message that stipulates the at least one additional feature, the first set of computer instructions further to receive over the network a second message that includes a second set of received features in response to the request message that stipulates the at least one additional feature...

Claim 48 recites, in pertinent part, as follows:

processing means for extracting at least one feature from a digital version of the media sample, said processing means responsive to a user input to extract a first set of features and responsive to a request message identifying at least one additional feature to extract a second set of features consistent with the identified at least one additional feature ...

Claim 50 recites, in pertinent part, as follows:

receiving at the portable wireless device a request message requesting at least one additional feature; at the portable wireless device, extracting at least one extra feature consistent with the request message; and transmitting from the portable wireless device a message that includes the extracted extra feature...

Claim 37 distinguishes over the combination of cited art for the same reasons as claims 1, 23, 48 and 50, but recite from the perspective of the entity sending the request message and using the features to identify a match rather than the perspective of the entity that receives a request message and extracts a second set of features in response. Barton wholly lacks this aspect of the claims. The office action admits that Wang fails to disclose, teach or suggest it, so the combination of Wang and Barton fails to teach or suggest this feature also.

The Patent Office rejected claims 18-20 and 35 under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Barton as applied to claims 1 and 23 above, and further in view of Ravago, U.S. Patent No. 6,529,584.

Ravago does not remedy the deficiencies of Wang and Barton.

Ravago discloses an audio program delivery system (abstract) which provides audio content for a user through a telephone replay device (column 3, lines 21-35). A user may enter certain attributes and selections at an Internet website which an intelligent program generation module may use to create a customized program for that particular user (column 5, lines 42-53).

Ravago is not seen as particularly relevant to the independent claims since Ravago does not address media samples and the extraction of features from media samples. Ravago is seen to be cited only for its teachings specific to MPEG-7.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims under 35 U.S.C. 103(a) based on Wang, Barton, and Ravago, alone or in combination, and to allow all of the pending claims 1-9, 12, 16-20, 22-27, 30, 35, 37, 38, 40, and 47-50 as now presented for examination. An early notification of the allowability of claims 1-9, 12, 16-20, 22-27, 30, 35, 37, 38, 40, and 47-50 is earnestly solicited.

Respectfully submitted:

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